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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,054	12/03/2001	Noriyuki Yokouchi	FUSO3.001AUS	6225

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EXAMINER

LUND, JEFFRIE ROBERT

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/007,054

Applicant(s)

YOKOUCHI ET AL.

Examiner

Jeffrie R. Lund

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 13-26 and 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 27-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-12, and 27-31 in Paper No. 9, filed March 31, 2003, is acknowledged.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 80 and 84 in figures 3A and 3B. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 5-9, 11, 12 and 27 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Bowman et al, US patent 5,044,943.

Bowman et al teaches the claimed invention in figure 2 and throughout the specification, specifically, column 3 lines 12-15.

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5. Claims 1, 2, 4, 6-9, 11, and 27 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Mizuno et al, US patent 5,534,072.

Mizuno et al teaches the claimed invention in figure 1 and 2, and throughout the specification, specifically, column 14 lines 5-20.

6. Claims 1-3, 5-11, and 27 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Moore, US patent 5,820,686.

Moore teaches the claimed invention in figure 2, 4A-4J, 22A-F, and throughout the specification, specifically, column 9 line 33 through column 13 line 47 and column 23 lines 25-44.

7. Claims 1, 2, 5-9, 11, 12 and 27 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Wang et al, US patent 6,167,834 B1.

Wang et al teaches the claimed invention throughout the abstract and specification, specifically, column 9 lines 37-48.

8. Claims 1, 4, 6-9, 11, and 27 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Ohmi et al, US patent 6,423,178 B1.

Ohmi et al teaches the claimed invention in figures 1 and 3, and throughout the specification, specifically, column 3 lines 46-48.

9. Claims 1, 7, 8, 27, 28, and 30 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Ho et al, US patent 6,500,266 B1.

Ho et al teaches the claimed invention in figures 3 and 9, and throughout the abstract and specification, specifically, column 4 lines 8-12, column 6 lines 21-24, and column 8 lines 9-16.

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10. Claims 1, 5-11, and 27 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Kholodenko et al, US patent 6,503,368 B1.

Kholodenko et al teaches the claimed invention in figures 1a and 3, and throughout the specification, specifically, column 3 lines 7-34, and claim 12.

11. The examiner notes that:

- a. Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danley*, 120 USPQ 528, 531, (CCPQ 1959); "Apparatus claims cover what a device is, not what a device does" (Emphasis in original) *Hewlett-Packard Co. V. Bausch & Lomb Inc.*, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990); and a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus " if the prior art apparatus teaches all the structural limitations of the claim *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). Also see MPEP 2114.
- b. "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Furthermore, "Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims." *In re Young*, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

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- c. All of the above patents are inherently capable of performing an oxidization process on a substrate containing an aluminum containing layer to create an aluminum oxidized area and an aluminum non-oxidized area.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1, 5-12, and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masakazu Arai et al, in AIAs Oxidation System with H₂O Vaporizer for Oxide-Confined Surface Emitting Lasers in view of Kholodenko et al.

Masakazu Arai et al teaches an AIAs Oxidation System with H₂O Vaporizer for Oxide-Confined Surface Emitting Lasers that includes a rotating pedestal in figure 1.

Masakazu Arai et al does not teach a wafer holder with an embedded heater that is made of silicon or silicon carbide.

Kholodenko et al teaches a holder that includes a first section 88 and second section 90. The first section 88 is mounted on the second section 90 and includes: a wafer support surface made of silicon or silicon carbide, and an embedded resistive heater. Kholodenko et al also teaches that the support can be mounted on a shaft.

The motivation for replacing the generic holder of Masakazu Arai et al with the holder of Kholodenko et al is to supply the required but generically described holder. Furthermore, Kholodenko et al teaches a holder that may be used at elevated

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temperatures without excessive thermal expansion stresses, and to maintain uniform heat transfer rates and temperature differentials across a substrate during its processing.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the holder of Kholodenko et al in the apparatus of Masakazu Arai et al.

14. Claims 1-3, 5-12, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masakazu Arai et al, in AIAs Oxidation System with H₂O Vaporizer for Oxide-Confined Surface Emitting Lasers in view of Moore.

Masakazu Arai et al teaches an AIAs Oxidation System with H₂O Vaporizer for Oxide-Confined Surface Emitting Lasers that includes a rotating pedestal in figure 1.

Masakazu Arai et al does not teach a wafer holder that is made of graphite or silicon carbide with a thickness of approximately 1 mm.

Moore teaches a holder that includes a wafer support surface made of graphite or silicon carbide with a thickness of approximately 1 mm.

The motivation for replacing the generic holder of Masakazu Arai et al with the holder of Moore is to supply the required but generically described holder. Furthermore, Moore teaches a holder that maintains uniform temperature and facilitates maintaining uniform process gas characteristics over the substrates.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the holder of Moore in the apparatus of Masakazu Arai et al.

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15. Claims 1, 4, 6-9, 11, 12, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masakazu Arai et al, in AIAs Oxidation System with H₂O Vaporizer for Oxide-Confined Surface Emitting Lasers in view of Mizuno et al.

Masakazu Arai et al teaches an AIAs Oxidation System with H₂O Vaporizer for Oxide-Confined Surface Emitting Lasers that includes a rotating pedestal in figure 1.

Masakazu Arai et al does not teach a wafer holder that is made of copper.

Mizuno et al teaches a holder that includes a wafer support surface made of copper.

The motivation for replacing the generic holder of Masakazu Arai et al with the holder of Mizuno et al is to supply the required but generically described holder.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the holder of Mizuno et al in the apparatus of Masakazu Arai et al.

Conclusion

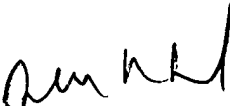
16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art teaches the technological background of the invention. The cited art contains patents that could be used to reject the claims under 35 USC § 102 or 103. These rejections have not been made because they do not provide any additional or different teachings, and if they were applied, would have resulted in an undue multiplication of references. (See MPEP 707.07(g))

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17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (703) 308-1796. The examiner can normally be reached on Monday-Thursday (6:30 am-6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on (703) 308-1633. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Jeffrie R. Lund
Primary Examiner
Art Unit 1763

JRL
June 10, 2003